

Application No. 10/597,794
Response to the Office Action dated December 30, 2008

REMARKS

This Amendment is in response to the Office Action mailed on December 30, 2008. Claims 1, 3, 5, 7 and 8 are amended. Claim 1 is amended to include the features of claim 2 and is further supported, for example, in the specification on page 8, lines 21-29; page 12, lines 14-19; and page 25, lines 10-16. Claims 3, 5, 7 and 8 are amended to depend from claim 1. Claim 10 is new and is supported, for example, in the specification on page 28, line 1-page 30, line 10. Claim 2 is cancelled without prejudice or disclaimer. No new matter is added. Claims 1 and 3-10 are pending.

§102 Rejections:

Claims 1-3 and 5 are rejected as being anticipated by Nonaka (US Patent No. 7,162,151)). This rejection is traversed.

Claim 1 is directed to a multi-eye imaging apparatus that requires, among other features, a plurality of imaging systems. The plurality of imaging systems include an image memory for accumulating a plurality of frames of image information captured in time series and a shake amount obtaining means for comparing the plurality of frames of image information captured in time series by the second imaging system and accumulated in the image memory to obtain a shake amount. The plurality of imaging systems also include an image combining means for combining the plurality of frames of images accumulated in the image memory after their pixels are shifted relative to each other so that resolution of the combined image is higher than that of the plurality of frames of images.

Nonaka does not disclose or suggest these features. The rejection interprets the image memories 19a, the camera shake detection section 19 and the image processing/forming section 22 of Nonaka as the image memory, the shake amount obtaining means and the image combining means, respectively, of claim 1. The processing/forming section 22 of Nonaka processes image data based on image data inputted from the image signal processing section 14 and calculation results of the moving direction and the moving amount of the main image pickup device 12 determined based on image information recorded in the image memories 19a. The processing/forming section 22 then outputs the resultant image data to the monitor 24

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(see column 4, line 29-column 5, line 3 of Nonaka). Thus, the processing/forming section 22 does not receive image data from the image memories 19a, but receives calculation results of the moving direction and the moving amount of the main image pickup device 12 determined based on the image data recorded in the image memories 19a. Nowhere does Nonaka disclose or suggest the processing/forming section 22 combining the plurality of frames of images accumulated in the image memory after their pixels are shifted relative to each other so that resolution of the combined image is higher than that of the plurality of frames of images, as required by the image combining means of claim 1.

Also, there is no motivation in Nonaka to modify its processing/forming section 22 to the features of the image combining means of claim 1. An object of Nonaka is to acquire image data in which the influence of camera shake is reduced (see column 3, lines 7-8 of Nonaka). In order to achieve this, Nonaka teaches moving the main image pickup device 12 in accordance with the detected camera shake amount, or processes and outputs the image based on the detected camera shake amount and the image data obtained by the main image pickup device 12 (see column 4, line 29-column 5, line 3 of Nonaka). Another object of Nonaka is to be able to confirm the presence or absence of an effect of camera shake correction (see column 3, lines 13-14 of Nonaka). Nonaka attempts to achieve this by teaching that image data not subjected to camera shake reduction is formed by superimposing a plurality of image data produced by a second imaging system 16 and 17 and then displayed in parallel with an image that has been subjected to camera shake correction (see column 6, lines 26-41).

In contrast, the image combining means of claim 1 allows the multi-eye imaging apparatus to prevent a reduction in the effect of pixel shift (i.e., providing a high-resolution image) even when there is an apparatus shake or the like. As Nonaka is not concerned with preventing a reduction in the effect of pixel shift, Nonaka provides no motivation for modifying its processing/forming section 22 to be capable of combining the plurality of frames of images accumulated in the image memory after their pixels are shifted relative to each other so that resolution of the combined image is higher than that of the plurality of frames of images, as required by the image combining means of claim

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1. For at least these reasons claim 1 is not disclosed by Nonaka and should be allowed. Claims 3 and 5 depend from claim 1 and should be allowed for at least the same reasons.

§103 Rejections:

Claim 4 is rejected as being unpatentable over Nonaka in view of Ono (JP No. 2001-012927). This rejection is traversed. Claim 4 depends from claim 1 and should be allowed for at least the same reasons described above. Applicants do not concede the correctness of this rejection.

Claim 6 is rejected as being unpatentable over Nonaka in view of Tamamura (US Patent No. 7,463,284). This rejection is traversed. Claim 6 depends from claim 1 and should be allowed for at least the same reasons described above. Applicants do not concede the correctness of this rejection.

Claims 7 and 8 are rejected as being unpatentable over Nonaka in view of Nakazono (JP No. 2003-134385). This rejection is traversed. Claims 7 and 8 depend from claim 1 and should be allowed for at least the same reasons described above. Applicants do not concede the correctness of this rejection.

Claim 9 is rejected as being unpatentable over Nonaka in view of Yu (US Patent No. 6,611,289). This rejection is traversed. Claim 9 depends from claim 1 and should be allowed for at least the same reasons described above. Applicants do not concede the correctness of this rejection.

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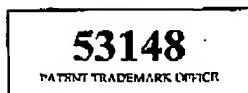
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Conclusion:

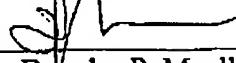
Applicants respectfully assert that claims 1 and 3-10 are in condition for allowance. If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicants' primary attorney-of record, Douglas P. Mueller (Reg. No. 30,300), at (612) 455-3804.

Respectfully submitted,



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Dated: March 30, 2009

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